

Event Display Updates

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Location of codes

https://github.com/sookhyun/coresoftware/tree/evt_display/offline/packages/Display

The screenshot shows a GitHub repository page for 'sookhyun / coresoftware', which is a fork of 'sPHENIX-Collaboration/coresoftware'. The repository is currently on the 'evt_display' branch. The file structure is as follows:

| File/Folder | Description | Last Commit |
|--------------|---|--------------|
| .. | | |
| display | initial commit - main display module | 2 months ago |
| interface | initial commit - interface to fun4all world | 2 months ago |
| modules | initial commit - detector modules | 2 months ago |
| Makefile.am | initial commit of event display | 2 months ago |
| autogen.sh | initial commit of event display | 2 months ago |
| configure.in | initial commit of event display | 2 months ago |

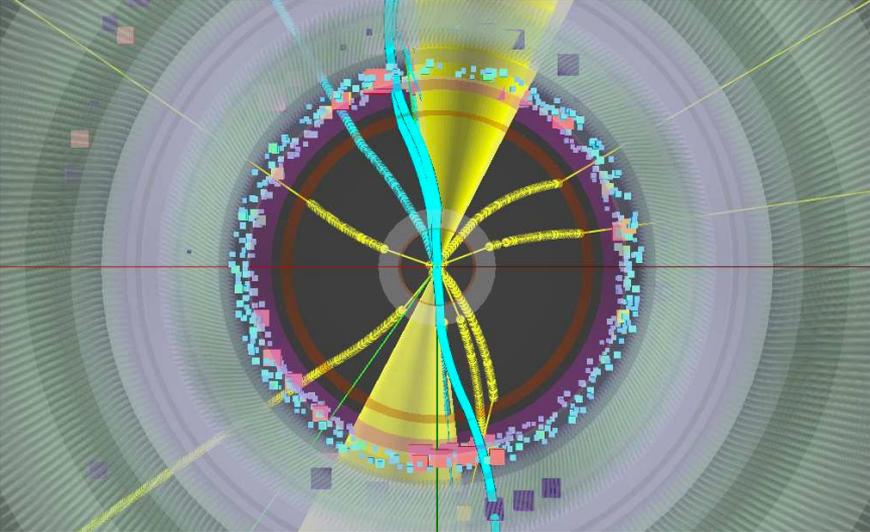
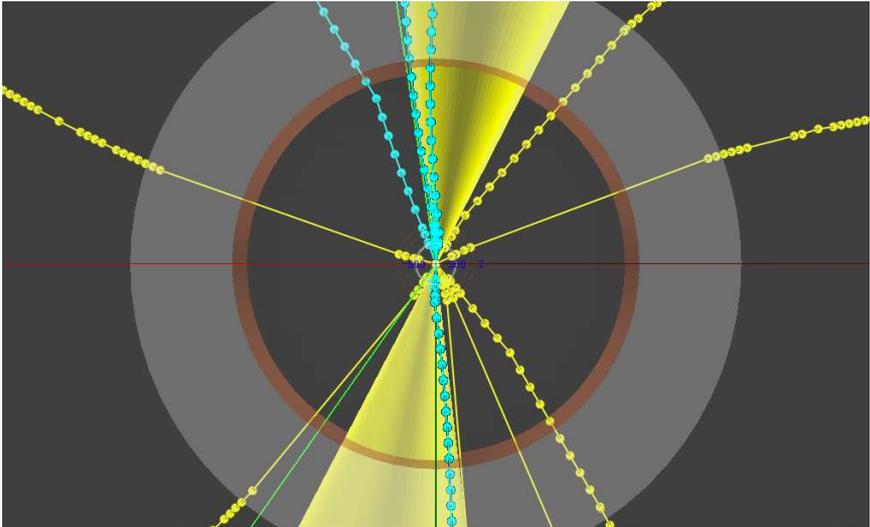
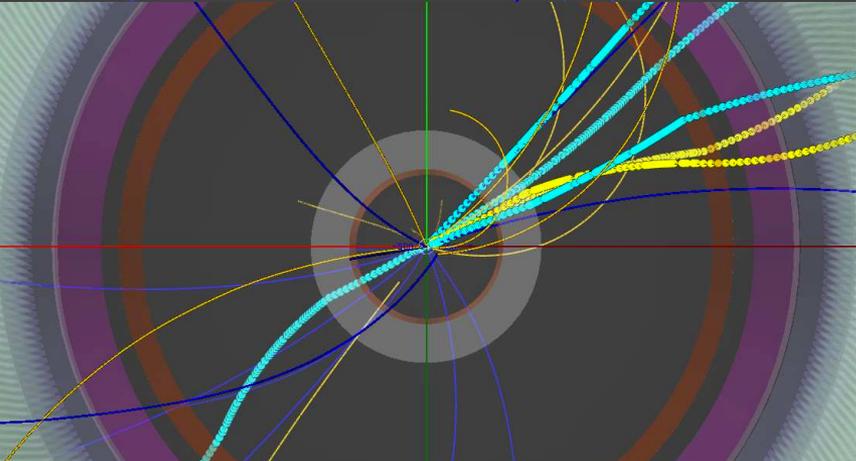
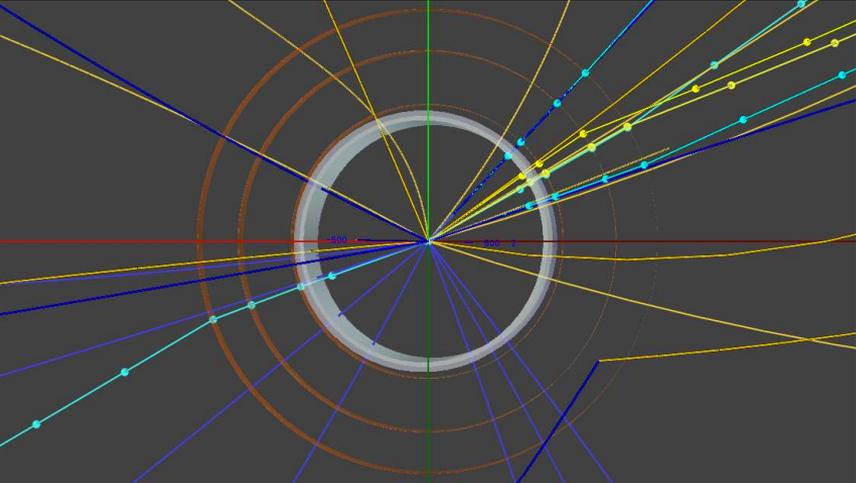
What is new

- Commits to Github development branch “evt_display” from July 28 include :
 - mSvtxEveDisplay
 - Reconstructed clusters on MAPS and TPC (position only)
 - Tracks connecting clusters throughout entire world volume
 - mJetEveDisplay
 - set/get_jet_pt_threshold
 - set/get_jet_e_scale

What is new

- Commits to Github development branch “evt_display” from July 28 include:
 - Module/detector switches
 - is_svtx_on (mSvtxEveDisplay), is_jet_on (mJetEveDisplay), is_truth_on (mG4EveDisplay)
 - is_calor_on (mCaloEveDisplay)

Display of svtx clusters



What is new

- More updates since the July 28 commits (comments from Jin Huang)
 - mCaloEveDisplay
 - More switches: `is_cemc_on`, `is_hcalin_on`, `is_hcalout_on` (mCaloEveDisplay)
 - Boxes representative of tower energy rotated to orient towards beam pipe
 - TowerGeomContainer codes need to be updated to read actual size of towers (details follow in next slide)
 - Detector geometry now can be read from
 - A. an external root file.
 - B. the DST node output (using PHGeomUtility)

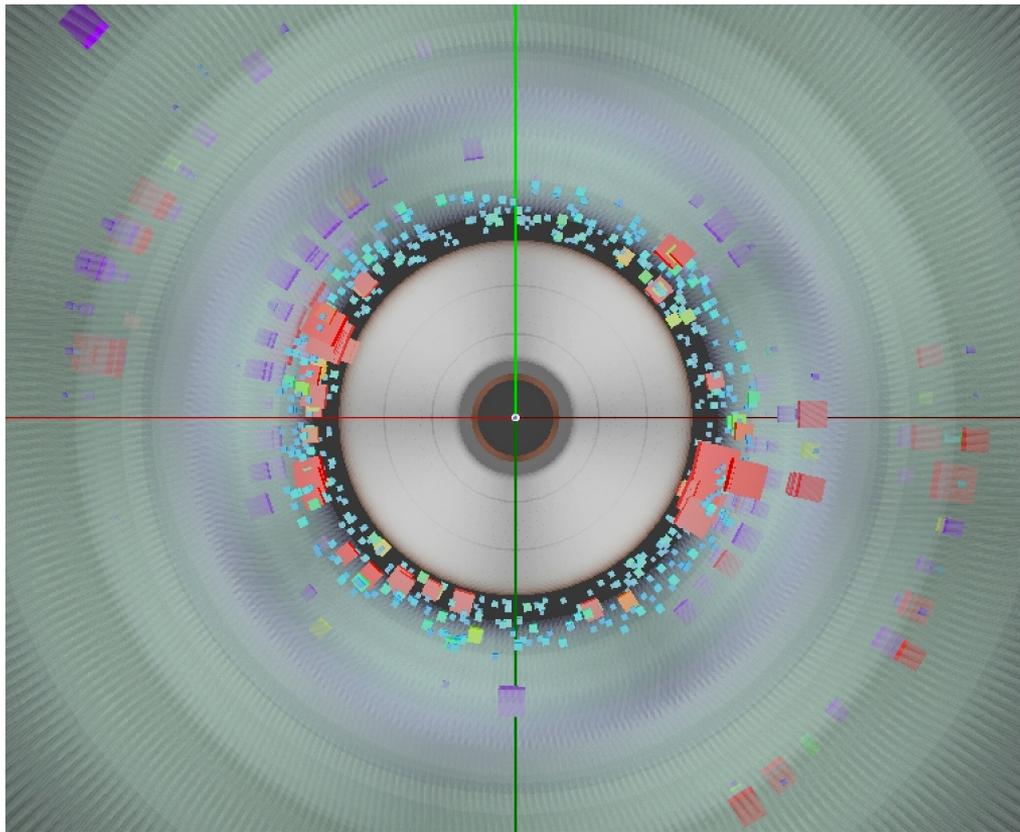
in RawTowerGeomContainerv1.cc

Needs to be RawTowerGeomv1* or calls virtual functions



```
66
67 RawTowerGeom *
68 RawTowerGeomContainerv1::get_tower_geometry(RawTowerDefs::keytype key)
69 {
70     Iterator it = _geoms.find(key);
71     if (it != _geoms.end())
72     {
73         return it->second;
74     }
75     return NULL;
76 }
77
```

Display of calorimeter energy



Usage : in macro/macro/Fun4All_EventDisplay.C

width, height, use_fieldmap, use_geofile, mapname,
geoname jet_pt_threshold, jet_e_scale, calo_e_threshold

PHEventDisplay* event_display

```
= new PHEventDisplay(1920, 860, true, false, "sPHENIX.2d.root",  
                    "sphenix_maps+tpc_geo.root", 5.,30.,0.0009,  
                    false, true, true, true, false, false, 2);
```

is_svtx_on, is_cemc_on, is_hcalin_on, is_hcalout_on, is_jet_on, is_truth_on, verbosity

Plans

Commit new changes since July 28.

Make a pull request after meeting for more users to easily test and give feedback.